



US 18024

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of: )  
Tiziano Dall'occo et al. )  
Serial No.: 09/914,305 ) Examiner: Rip Lee  
Filed: August 27, 2001 ) Art Unit: 1713  
For: **PROCESS FOR THE PREPARATION** )  
**OF ETHYLENE POLYMERS** )

March 20, 2004

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RULE 132 DECLARATION**

I, Dr. Tiziano Dall'Occo hereby declare that:

1. I am Tiziano Dall'Occo.
2. THAT in 1981 I received a Degree in Chemistry at the University of Ferrara, faculty of Science.
3. THAT in 1983-84 I spent two years at the University of Ferrara in the organic synthesis as a Fellow of P.R.D. courses. In November 1984 I was employed by Dutral S.p.A. (Montedison group) at the "G. Natta Research Center" in Ferrara as a researcher in the Ziegler-Natta polymerization catalysis applied to the synthesis of polyethylene and ethylene copolymers. In 1989 I joined HIMONT ITALIA S.r.l. in their "G. Natta Research Center" where I worked as project leader of basic research in the study of catalytic systems for ethylene

homo- and copolymerization. My present position in Basell Polyolefine Italia S.p.A. is Scientist in olefin polymerization catalysis.

4 That I have co-authored at least 25 papers on various aspects of inorganic and organic chemistry and olefin-polymerization, and that I am co-inventor of 26 patent applications relating to olefin copolymerization by Ziegler-Natta based catalyst including the use of metallocene based systems.

5. THAT I am one of the inventors and familiar with the disclosure and the claims of the above-identified application Serial No 09/914,305.

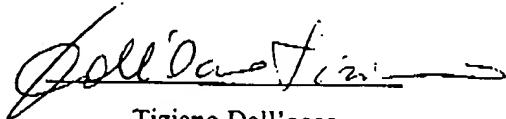
6. THAT I understand the Examiner has questioned whether the three-fold activity improvement of Example 3 over Comparative Example 8 would be unexpected to one skilled in the art. My answer is that this improvement is unexpected and surprising because the references of record in this application are silent with respect to any activity improvement which might result from changing from the catalyst of Comparative Example 8 to the catalyst of Example 3 for the polymerization of ethylene polymers.

7. THAT I understand the Examiner has also questioned whether Examples 5 and 6 can be compared to the known compound of Example 1 in view of the difference in Al/Zr ratio (3000 for the known compound of Example 1 vs. 1000 and 1060, for Examples 5 and 6 respectively, and because reaction times were not held constant. My answer is that these Examples can be directly compared because one skilled in the art would recognize that at least up to values of about 2000, higher Al/Zr ratios result in higher activity values, so that based on differences in the Al/Zr ratio, the known compound of Example 1 would have been expected to exhibit higher activity values than Examples 5 and 6, see Figure 1 of Deffieux

et al., Activation Of MAO: Activity Of Metallocene Catalysts With Low MAO Content For Olefin Polymeriztion, published in Metallocenes '95, April 1995, copy attached hereto. Moreover, the activity measurement (Kg/g Zr.h) shown in Table 1 of the specification takes into account differences in the amount of metallocene used and the length of reaction. Thus, a comparison of the activity measurement of Examples 5 and 6 to the known compound of Example 1 is valid.

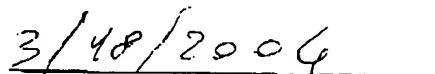
I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and that further these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the present application or any patent resulting therefrom.

Signed this 20th day of March, 2004



Tiziano Dall'occo

I hereby certify that this correspondence is being deposited with sufficient postage thereon with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents  
P.O. Box 1450, Alexandria, VA 22313-1450 on March 20, 2004.



Date of Signature